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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. VIII No. 1
January 1985

Unemployment Rate

Seasonally Adjusted
November*

ARIZONA	4.1%
Maricopa Co.	3.1%
Pima Co.	4.1%
UNITED STATES	7.2%

Consumer Price Index

National-October
1967 - Base Year

Wage Earner/Clerical Worker -	312.1
% Chg. Yr. Ago	3.6
All Urban -	315.3
% Chg. Yr. Ago	4.2

Phoenix-3rd Qtr.
1977 - Base Year

All Urban -	183.1
% Chg. Yr. Ago	5.7

Producer Price Index

National-November*
1967 - Base Year

All Commodities-	310.4
% Chg. Yr. Ago	1.6
Finished Goods -	292.3
% Chg. Yr. Ago	1.9

* Preliminary

The Cost of Hiring

A recent question asked of this office was, "What is the average cost of hiring an employee?" A review of the existing literature revealed wide variations in the data. However, consensus did exist for one conclusion--the costs are high.

Kenneth S. Teel has categorized the costs of replacing an employee into four groups: separation costs, vacancy costs, acquisition costs and training costs. He found that replacement costs vary among organizations and among job levels. Costs of replacing hourly employees range from 7 to 20 percent of the first year's pay; those of replacing nonsupervisory salaried personnel range from 18 to 31 percent; and those of replacing managers range from 23 to 175 percent.

The acquisition and training costs constitute the cost of hiring an employee, whether as a replacement employee or as one filling a newly created position. Teel lists the various elements of acquisition and training costs as follows:

ACQUISITION COSTS

Advertising
Brochures
Employment agency fees
College recruiting
Application processing
Applicant travel
Reference checks

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JoAnn H. Wilson, editor

ACQUISITION COSTS (Contd.)

Interview(s)
Medical exam
Psychological exam
Moving and relocation
Accounting and payroll entries
Human resources department overhead

TRAINING COSTS

New hire orientation
  Employee's time
  Trainer's time
Formal job training
  Employee's time
  Trainer's time
On-the-job training
  Supervisor's time
  Non-supervisory helper's time
Substandard performance of new employee
Extra work for others to offset substandard performance
Higher error rate for new employee

A 1969 survey of 40 companies in Washington, D.C. conducted by Anthony DePasquale was able to obtain concrete hiring cost data from only 11 of the companies surveyed. The others were unable to compute a monetary cost of hiring. Of those who did supply a figure, the average cost of hiring 841 professional personnel was $1,467 and of hiring 1,879 nonprofessional personnel was $175. It should be noted that prices of goods and services, as measured by the Consumer Price Index, have nearly tripled since 1969 when these figures were collected.

Recruiting is a very expensive part of hiring costs. Ray A. Killian calculated average costs for filling a $20,000 salary position in 1976. Those costs were as follows:

Various forms of advertising	$ 400
Travel for interviews	750
Executive interview time	600
Agency fee	4,000
Travel and other expenses for employee and family to check housing	800
Moving expenses and other related costs	2,000
Real estate fees (if paid)	5,000
TOTAL	$13,550

Robert Sibson had some other examples based on 1975 costs:

	ANNUAL SALARY	COST OF HIRING
Secretary	$ 7,800	$ 1,520
Accountant	14,000	2,965
Senior Engineer	17,500	4,235
Low-level Manager	20,000	11,050
Mid-level Manager	30,000	18,300

A breakdown of those costs by type is shown in Table 1.

To reduce hiring costs, Sibson suggests that an employer:

- Measure total hiring costs and cost per hiring.
- Look at turnover selectively.
- Analyze recruiting methods.
- Reduce start-up costs.
- Use hiring costs in manpower planning.

Recruiting costs can sometimes be reduced by changing the sources that are used. The ranking of sources in Table 2 was developed by Roger H. Hawk. He also organized recruiting costs into a three-part structure:

- Personnel costs--salaries, benefits, overtime premiums.
- Operational costs--telephone and telegraph; recruiting staff travel and living expenses; applicant travel and living expenses; professional fees and services; advertising in newspapers, technical journals, radio and TV; field trips; pre-employment physical exams; information services; supplies, materials and postage.
- Overhead--rent, office furniture, equipment.

The last major component of hiring costs is training costs. Most employees must be oriented and trained to a standard level of competence before assuming their regular duties. Wayne F. Cascio points out that there are three major types of training costs: informational literature, instruction in a formal training program and instruction by employee assignment. Although recent figures on training new hires are not available, Anthony Carnevale estimates that industry spends at least $30 billion annually for all training and this does not include salaries.

To gain an Arizona perspective on this issue, several organizations, both public and private, were contacted. It was very difficult for most of them to offer any kind of figures. However, one large regional company with local facilities in Arizona did provide some information. Its basic costs include items such as recruiting, applications, interviewers' time, testing, reference checking, arranging medical exams and orientation. The company also calculates a load factor which includes benefits, overhead and miscellaneous support and supplies. The following basic costs (excluding the load factor) are from 1982.

Service Worker	$ 425
Typist	443
Basic Craft Worker	466
Stenographer	481
Complex Craft Worker	693
Manager	3,000

That company has also derived an average training cost of $10 an hour per person, with the training lasting from three days to six months.

As can be seen from the various studies, there is no simple answer to the question concerning hiring costs. Variables include occupation, recruitment source and type of training. Since the average annual job turnover rate for all companies as reported by the Bureau of National Affairs is almost 22 percent of the work force (Cascio, p. 17), hiring costs are a substantial expense for employers.

Barbara Keene

SOURCES

Anthony Carnevale, "Human Capital: The Future for Private Training," Training and Development Journal, 36 (January 1982), 41-48.

Wayne F. Cascio, Costing Human Resources: The Financial Impact of Behavior in Organizations, New York: Van Nostrand Reinhold Company, 1982.

Anthony DePasquale, "Personnel Digests," Personnel Administration, 32 (January-February 1969), 56.

Roger H. Hawk, The Recruitment Function, American Management Association, 1967.

Ray A. Killian, Human Resource Management: An ROI Approach, American Management Association, 1976.

Robert Sibson, "The High Cost of Hiring," Nation's Business, (February 1975), 85-88.

Kenneth S. Teel, "Estimating Employee Replacement Costs," Personnel Journal, 62 (December 1983).

Table 1

HIRING COST PERCENTAGES BY TYPE OF COST

	Agency Fees	Interview Time	Administrative	Start-Up	Relocation
Secretary	51	13	10	26	0
Accountant	61	9	7	23	0
Senior Engineer	68	6	5	21	0
Low-level Manager	40	3	2	10	45
Mid-level Manager	33	3	2	8	54

Table 2

RECRUITING SOURCES RANKED BY COST

	Source	Factors in Cost*
Low Cost		
	Employee referrals	
	Company transfers and promotions**	Pro rata share of personnel register
	Write-ins	
	Ad responses	Advertising costs
	Field trips	Recruiters' travel and living expenses; advertising costs
	Employment agencies	Agency fee, recruiters' travel and living expenses (occasionally)
High Cost		

*Initial contact and interview expenses are factors of cost no matter what the source.

**Excludes cost of any unique relocation policies, such as refunds on cost of sale of home.

HIGHLIGHTS OF A NATIONAL CONFERENCE ON CAREER GUIDANCE IN THE COMPUTER AGE (Part II)

The National Occupational Information Coordinating Committee (NOICC) and eight other national organizations concerned with career counseling sponsored a national conference in Charleston, South Carolina on October 24-26, 1984. Part I of a report on this conference appeared in the preceding December issue. The conclusion follows.

Day two of the conference opened on the topic of "Federal and State Leadership." The topic was kicked off with a reminder of the warning implicit in the title of an article recently published in the Vocation Education Digest, "Hand in Hand or Fist in Teeth." The warning was echoed by Robert M. Worthington, who is assistant secretary for vocational and adult education at the U.S. Department of Education. The article, he said, pointed out that Congress demands that education and labor work together. The NOICC was created especially to bring that about in the area of occupational and career information; NOICC is mandated to produce occupational supply and demand information for career and vocational decisions. Old interagency rivalries that lead to expensive duplication, or that inhibit integration of both agencies' information, will not be tolerated at either the national or state level.

Mid-morning brought a discussion of the Military-Civilian Occupational Crosscode Project sponsored by the Office of the Assistant Secretary of Defense. Anita Lancaster, acting assistant director, Office of Accession Policy, U. S. Department of Defense, made the presentation. Earlier, she had passed out an "Abstract" of the project stating it had three deliverables:

1. the development of an occupational crosscode between the classification structures of the uniformed military services and various occupational classification systems including the Dictionary of Occupational Titles (DOT) and the Standard Occupational Classification (SOC) structure;

2. the aggregation of the crosscodes into a form usable by producers of civilian career information resources, such as computerized career information delivery systems (CIDS); and

3. the aggregation of the crosscodes into a form appropriate for displaying a joint-service occupational and training publication entitled Military Career Guide: Employment and Training Opportunities in the Military.

When beginning on the project, it was startling to Dr. Lancaster that the Army, Navy, Marines and Air Force each had separate occupational systems. It was the purpose in producing the third deliverable to develop one system that could be commonly used. The Military Career Guide, patterned after the Occupational Outlook Handbook, was completed in July 1984. It is available free by contacting:

MEPCOM
2500 Green Bay Road
North Chicago, Illinois 60064
Telephone: 1-800-323-0513

Another product of the project is called "Military Occupational & Training Data." The MOTD is designed for career information resource developers. It contains narrative and coded data for those seeking military occupational information to include in other publications. To obtain the MOTD, write:

Dr. Anita R. Lancaster
OASD (MI&L) (MP&FM) (AP)
2B271, Pentagon
Washington, D.C. 20301-4000

The rest of the morning was taken up in the subject of "Alternatives for the Delivery of Career Information." Joyce Kinnison, now a private consultant in the area of career information development but formerly the North Carolina SOICC director, acted as moderator of a panel discussing alternatives. The Wisconsin Career Information System User-Services Specialist, Darcy Mellon-Sullivan, offered three alternatives. The first was a State Occupational Outlook Handbook (OOH). She said Wisconsin had developed one patterned after the national OOH which was essentially a "dump" of the information on the Wisconsin Occupational Information System. Another product suggested was one which many state labor market information units had done called "Occupational Licensing Requirements." The third alternative was area lists of local labor market analysts, their names, addresses and telephone numbers.

The Michigan Occupational Information System director, Joe McGarvey, said his state

offered its OIS on microfiche with a manual scan sheet, a microcomputer search process of a microfiche file, and, of course, total computer delivery with search software of a mainframe computer file. Mr. McGarvey emphasized that the real cost of an information system is in the development of the information in the first place, and in user training, not in development of the delivery systems. He also had come to the conclusion from his own experience with the various systems that there was much greater usage of total computer interactive systems than of microfiche.

Oregon, whose University of Oregon Research Center has been a pioneer in development of occupational information systems for other states as well as its own, was represented by Bruce McKinlay, executive director of the Career Information System. For alternative modes to computer delivery, Mr. McKinley suggested several low-tech possibilities. Needle sort deck sets was one of these. By passing a needle through punched holes of cards in a deck containing occupational information, it is possible to graphically illustrate the importance of certain kinds of preparation to many careers. The limited opportunities for those who have had no mathematics in school can be shown by needle sorting on the math requirement, and pitching the small remainder of the deck onto the floor. He noted that the CIS also had paper products, and that these should be considered as complimentary to a computer system.

The final panelist was J.B. Morton, retired SOICC director from Oklahoma. He used his time to promote Improved Career Decision Making (ICDM) as an important alternative to computer CISs. It was a very good method, in his estimation, for training users about available career information. He suggested paying special attention to the ICDM matrix of products (national, state) and offering it as a handy reference for counselors' routine use. He also suggested a solution to the lack of money for career information products that states suffer. He said he approached a foundation to pay for printing an occupational manual and found it very receptive to the idea. It can also be very successful to use newspapers for printing and distribution of career tabloids, he said.

That ended the morning session. The afternoon session was to begin on the subject of "Promoting Effective Use of Computers in Career Counseling," which was modified to "A Systems Approach to Career Information."

The title was modified by Carl McDaniels, professor of education and coordinator of career education, Virginia Polytechnic Institute, Blacksburg, Virginia. As author of many books on the subject of career education, Dr. McDaniels felt it was useful to give the term "system" a very broad definition. He defined system as "things formed together according to a scheme." In addition, he believed it was important to recognize all systems have two elements -- the cognitive and the affective. The cognitive element of a system involves seeing and reading, hearing and touching. The affective element involves feeling, sensing, caring and dreaming.

Good career information systems include affective elements as well as cognitive ones. Some ways to include affective elements in career information systems, he suggested, were the following:

1. Set up ways to enable first-hand observations. This would include such techniques as programs for youth that permitted "shadowing." As many are aware, this is a technique whereby students are permitted to spend time with workers in occupations that interest them. The shadower follows the worker through several workdays of activity in order to become aware of all aspects of the job. Other first-hand observation techniques include summer work in the student's areas of interest and role playing.

2. Integrate work and leisure activities. Ask students about their hobbies, suggest occupations that use those hobby skills, and arrange opportunities to perform work using the hobby skills. One way to find opportunities is to contact local Rotary clubs. This ser-

vice organization even has an annual vocational assistance month. Members volunteer their services during this period to help youth know and understand their work.

3. Use slides and tapes and other video and audio combinations. Other examples include telephone hotlines, posters and other large visuals, workbooks and computer simulation.

In conclusion, Dr. McDaniels recited three dimensions of a career information system: (1) Use a multimedia approach. (2) Give wide locational dispersion to the delivery system. For example, maintain a presence at state fairs, shopping centers, libraries, senior citizen centers, and in business and industry. (3) Appeal to a wide range of user groups. The best served age group by most systems today is that between 12 and 22 years old. It is just as important to reach the other age groups since career changes can occur at any time in life. Give consideration to mobile career centers. Take advantage of good buys on recreational vehicles and use them for your mobile units. Finally, get involved with church groups. They have many resources to aid in getting your message out.

The next subject, "Identification of Counselor's Professional Needs," was discussed by a counselor and a former guidance coordinator. They were Hilda Minkoff (the counselor), George Washington High School, Philadelphia, Pennsylvania; and Kathryn Altman (former guidance coordinator), Charleston County South Carolina School District. They reported the results of a nationwide survey of counselors undertaken for the American School Counselors Association. Through the survey they discovered the following facts which they believe are most important: (1) Many counselors do not have a computer -- mainframe, mini, micro or otherwise. (2) Many counselors want and need training in the use of computers. (3) Counselors want help in reviewing the proliferating commercial software. (4) Counselors believe there is a need to support the view that there are other forms of learning than cognitive learning. (5) Counselors believe there is a need for support for the establishment of career resource centers. In addition, the survey identified a need for follow up of graduates to see if counseling was having the intended effect, and for job placement assistance to recent graduates not going on for advanced education.

Having ended the planned presentations for the second day of the conference, participants were again sent to their respective workshops to develop recommendations for improving career information delivery.

Friday, October 26, 1984 opened once more with a panel discussion, "Federal Legislative Considerations." Members were Walton E. Webb, coordinator of State and Interagency Networks for NOICC; Robert Williamson, senior legislative aide, U. S. House Committee on Education and Labor; Richard E. Johnson, counsel, Committee on Education and Labor, U. S. House of Representatives; John W. Smith, senior professional assistant, U.S. House Committee on Education and Labor; and Laura Morris, special assistant to U.S. Senator Hollings.

Moderator Walt Webb opened with the question, "What are the purposes of the Job Training Partnership Act (JTPA), and the Carl Perkins Vocational Education Amendments -- especially as they relate to career information delivery systems (CIDS)?" Mr. Williamson responded first. He admonished those present to realize that in Congress, legislative emphasis on education is small. Money for education, he said, is in the states, not at the national level. However, if anyone believed Congress should draft legislation or make appropriations specific to career information delivery, Mr. Williamson encouraged participants present to talk to congressional people -- that is, congressmen themselves, or their staffs. (Later he revealed that the telephone number for the House Labor and Education Committee staff people is (202) 225-0213.)

Dick Johnson, who as legal counsel to the House Labor and Education Committee drafted the Labor Market Information section of

JTPA, had a different kind of response. He noted that both JTPA and the Vocational Education Amendments of 1984 are targeted to the hardest to serve. The emphasis in both is in program improvement with special efforts for the hard to serve. Congress's intention is to make a difference for the especially handicapped in the labor market. That, of course, includes economically disadvantaged minorities and older workers.

Mr. Smith disagreed. From his perspective as former assistant to Congressman Augustine F. Hawkins, he contended JTPA has many problems. The one thing it does not do is serve the hard to serve, that is, Blacks and Hispanics. Rather, its requirements are more often met by "creaming," that is, by training those who have the best preparation already, and can get the greatest benefit from the additional short training period that JTPA permits. In another vein, however, there is much mention of career guidance and counseling in the Vocational Education Amendments, he said. Issuing a challenge to the conference attendees, he asked, "What are you going to do with the power it gives you?"

Somewhat in rebuttal to Mr. Smith, Mr. Williamson said, "Although JTPA is 'permanent', that is, does not have an expiration date as CETA did, it will nonetheless someday be revised as CETA was and as MDTA was before that. I know that Congressman Hawkins has an interest in this legislation and is not happy with it."

Laura Morris, a U.S. Senate aide, but more importantly with respect to this panel "one who is heavily involved in the implementation aspects of federal legislation," remarked, "Why can't the people who wrote the law understand what it means?" Ms. Morris said she is forever dealing with people in Congress and from the administration who read the same law and attach different meanings to it depending on the moment. "For instance," she said, "when the 'Jobs Bill' was passed, the director of economic development for the Congress put on a 'tirade' about how the legislation was unneeded, that all kinds of job opportunities were being projected (he named many service jobs); then he said he would spend all of his jobs money on high tech." "Is it any wonder," she exclaimed, "that I'm combative with these people?"

While the panel members were still present, questions from the audience were invited. One questioner suggested Congress could better enpower counselors to deal with the challenge of present times by seeing that what money is allocated gets directly to counselors. Some of the other concerns raised were answered by reminding participants that the Higher Education Act is up for review by Congress next year. It was suggested those concerns could be met in amendments to that legislation.

Although most of the morning was consumed by the panel on federal legislation, short periods remained for discussion of the "audible career employer," microcomputer career information software with voice output for the blind, and "OIS and CIDS linkages." The value in OIS and CIDS developers working together was expressed by Roger Lambert, director of the Wisconsin Career Information System. He pointed out that both kinds of systems use the same data, merely giving different emphasis to user groups. OIS emphasizes meeting the needs of program planners and administration while CIDS emphasizes those of students and counselors, he contended.

That ended the 1984 national conference to improve the delivery of career information. I hope that this report helps those of affiliated participating organizations in Arizona who could not attend. Those organizations include the Arizona State Occupational Information Coordinating Committee (ASOICC), Arizona Career Information System (ACIS), and members of local chapters of the Association of Computer Based Systems in Career Information, American College Personnel Association, American School Counselor Association, American Association of Counselor Development, American Vocational Association Guidance Division, National Vocational Guidance Association, Interstate Conference for Employment Security Agencies, and the National Governors' Association.

Ron Simon

THE ARIZONA LABOR IN NOVEMBER 1984

Arizona's unemployment rate dropped again in November, reversing the small increase recorded in October. At 4.1 percent, the November rate breaks the record low of 4.2 percent set in September of this year. Employment activity in Arizona during November was consistent with the rebound in employment, housing and retail sales observed nationally last month. Much of the increase in employment was expected due to seasonal factors such as Christmas-related retail trade and the beginnings of the winter tourism season. Even so, the October-to-November rise in the employment level was the largest ever recorded in the state.

Unexpectedly large numbers of jobs were created last month in a couple of key categories. Employment in construction rose sharply, with over 2,800 jobs added statewide. Most of the gains were recorded by home builders and sub-contractors providing roofing, electrical, plumbing and heating services. This is a response to a renewed surge in demand sparked by the recent declines in long term interest rates. Weather permitting, Arizona's construction industry should begin the new year on a strong note.

The manufacturing sector also performed very well during November. Nearly 900 jobs were added with 800 created by durable goods manufacturers. While most of the new jobs were located in the Phoenix area, Pima County accounted for 100 of them. This surprising strength shown by the state's durable goods producers comes at a time when manufacturing employment has remained relatively static at the national level. The outlook for these firms is uncertain. The Semiconductor Industry Association has reported weakening market conditions for three months in a row, suggesting that some of Arizona's high technology firms may reduce hiring activity in the months ahead. For now, however, Arizona manufacturing firms are operating at record levels.

The trade and service industries added jobs at faster rates than expected at this time of year, with solid gains registered throughout the state. Earlier fears of a sluggish fall and winter appear to be unfounded; Arizona's trade and service industries increased employment by 8,200 last month, about 3,000 more than the expected seasonal increase. New hotels, combined with existing operations that are staffing up for the winter season, accounted for a significant portion of the growth, while the booming business services sector, reflecting the rapid growth of commerce in the metropolitan areas, also was an important factor. Business services have grown faster in Arizona during the last 12 months than all other industries except for construction.

There was much variation in economi activity around the state during November. Eight of the 13 nonmetropolitan counties experienced rising unemployment, but most of the increases were small. While employment in some of the northern counties was falling, this was due to seasonal factors such as lower levels of tourism, construction and lumbering activity. Mining jobs were added in some areas and reduced in others. Most of southern Arizona enjoyed employment increases despite losing seasonal jobs in food processing. The trade sector performed especially well, with seasonal increases in wholesale and retail trade accounting for much of the increase, with Yuma, Santa Cruz and Cochise counties all doing somewhat better than expected.

The short-term outlook for Arizona is generally good, but uncertainty increases as we look to the future. The population, particularly in the metropolitan areas, is expanding rapidly, and may soon outstrip the ability of the economy to continue creating jobs at the current rate of 100,000-plus per year. Unemployment may rise, especially if the problems of the nation's semiconductor producers convert to layoffs and slow growth among Arizona firms. The prospect of federal budget cuts may influence the hiring patterns of the defense contractors in the state, and any increase in long-term interest rates would have a negative impact on construction in Arizona. Despite these potential problems, Arizona's economy will continue to compare favorably with the nation's economic performance for the forseeable future.

Arizona Labor Force and Employment

(in thousands)

	ARIZONA				
				-- Amt Change --	
	Nov.* 1984	Oct. 1984	Nov. 1983	Oct. to Nov.	1983 to 1984
TOTAL CIVILIAN LABOR FORCE	1477.4	1461.8	1399.4	+15.6	+78.0
Total Unemployment	59.9	61.7	100.9	-1.8	-41.0
Rate	4.1	4.2	7.2	---	---
Rate (Sea. Adj.)**	4.1	4.3	7.3	---	---
Total Employment	1417.5	1400.1	1298.5	+17.4	+119.0

THE ABOVE LABOR FORCE STATISTICS SHOULD

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

TOTAL WAGE AND SALARY	1187.8	1172.0	1105.0	+15.8	+82.8
Manufacturing	174.8	173.9	161.0	+0.9	+13.8
Durable Goods	137.5	136.7	125.5	+0.8	+12.0
Stone, Clay and Glass	7.0	7.0	6.5	+0.0	+0.5
Primary and Fabricated Metals	16.3	16.3	14.3	+0.0	+2.0
Primary Metals	7.1	7.0	6.1	+0.1	+1.0
Fabricated Metals	9.2	9.3	8.2	-0.1	+1.0
Machinery	68.9	68.3	63.4	+0.6	+5.5
Other Durable Goods	45.3	45.1	41.3	+0.2	+4.0
Aircraft and Missiles	20.2	20.2	18.6	+0.0	+1.6
Lumber and Wood Products (Except Furniture)	7.0	6.9	7.0	+0.1	+0.0
All Other Durable Goods	18.1	18.0	15.7	+0.1	+2.4
Nondurable Goods	37.3	37.2	35.5	+0.1	+1.8
Food and Kindred Products	8.4	8.4	7.7	+0.0	+0.7
Apparel	5.2	5.1	5.6	+0.1	-0.4
Printing and Publishing	13.4	13.4	12.6	+0.0	+0.8
All Other Nondurable Goods	10.3	10.3	9.6	+0.0	+0.7
Mining and Quarrying	12.9	12.9	14.3	+0.0	-1.4
Copper Mining	9.9	9.9	11.4	+0.0	-1.5
Other Mining and Quarrying	3.0	3.0	2.9	+0.0	+0.1
Construction	96.6	93.8	82.2	+2.8	+14.4
Trans., Communications, and Public Utilities	60.6	60.1	57.2	+0.5	+3.4
Transportation	26.5	26.1	24.0	+0.4	+2.5
Communications and Public Utilities	34.1	34.0	33.2	+0.1	+0.9
Trade	285.9	280.5	265.3	+5.4	+20.6
Wholesale Trade	57.0	56.4	52.8	+0.6	+4.2
Retail Trade	228.9	224.1	212.5	+4.8	+16.4
General Merchandise and Apparel	40.0	38.5	37.7	+1.5	+2.3
Food Stores	36.5	35.5	34.0	+1.0	+2.5
Automotive and Service Stations	26.1	26.1	24.4	+0.0	+1.7
Eating and Drinking Places	78.8	77.9	73.4	+0.9	+5.4
Other Retail Trade	47.5	46.1	43.0	+1.4	+4.5
Finance, Insurance, and Real Estate	70.0	69.7	66.8	+0.3	+3.2
Services and Miscellaneous	266.3	263.5	245.1	+2.8	+21.2
Hotels and Other Lodging Places	28.0	27.8	25.1	+0.2	+2.9
Business Services	58.2	57.1	48.9	+1.1	+9.3
Health Services	67.6	67.2	65.6	+0.4	+2.0
Other Services	112.5	111.4	105.5	+1.1	+7.0
Government	220.7	217.6	213.1	+3.1	+7.6
Federal	40.1	39.9	39.1	+0.2	+1.0
State and Local	180.6	177.7	174.0	+2.9	+6.6
School	111.3	109.5	107.9	+1.8	+3.4

* Preliminary
** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE--Prepared in cooperation with the U.S. Department of Labor,Bureau of Labor Statistics.

Arizona Labor Force and Employment

(in thousands)

MARICOPA COUNTY					PIMA COUNTY				
			-- Amt Change --					-- Amt Change --	
Nov.* 1984	Oct. 1984	Nov. 1983	Oct. to Nov.	1983 to 1984	Nov.* 1984	Oct. 1984	Nov. 1983	Oct. to Nov.	1983 to 1984
943.2	929.8	875.2	+13.4	+68.0	270.3	268.7	259.1	+1.6	+11.2
28.9	29.8	49.8	-0.9	-20.9	10.2	10.9	18.4	-0.7	-8.2
3.1	3.2	5.7	---	---	3.8	4.1	7.1	---	---
3.1	3.3	5.8	---	---	4.1	4.1	7.1	---	---
914.3	900.0	825.4	+14.3	+88.9	260.1	257.8	240.7	+2.3	+19.4

NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS.

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

780.5	767.7	716.7	+12.8	+63.8	216.1	213.8	203.5	+2.3	+12.6
126.5	125.6	116.1	+0.9	+10.4	29.3	29.2	27.3	+0.1	+2.0
101.1	100.4	91.5	+0.7	+9.6	24.3	24.2	22.6	+0.1	+1.7
4.4	4.4	3.9	+0.0	+0.5					
10.4	10.5	9.3	-0.1	+1.1					
55.1	54.6	50.5	+0.5	+4.6					
31.2	30.9	27.8	+0.3	+3.4					
25.4	25.2	24.6	+0.2	+0.8	5.0	5.0	4.7	+0.0	+0.3
5.3	5.1	5.1	+0.2	+0.2					
2.8	2.9	3.2	-0.1	-0.4					
9.9	9.8	9.3	+0.1	+0.6					
7.4	7.4	7.0	+0.0	+0.4					
0.7	0.7	0.7	+0.0	+0.0	2.9	2.9	3.5	+0.0	-0.6
67.4	65.0	57.3	+2.4	+10.1	20.0	19.5	16.2	+0.5	+3.8
39.7	39.2	37.0	+0.5	+2.7	9.0	9.2	8.6	-0.2	+0.4
17.9	17.4	16.2	+0.5	+1.7	4.1	4.2	3.6	-0.1	+0.5
21.8	21.8	20.8	+0.0	+1.0	4.9	5.0	5.0	-0.1	-0.1
196.4	192.2	180.1	+4.2	+16.3	45.8	45.1	44.0	+0.7	+1.8
45.5	45.1	41.8	+0.4	+3.7	6.7	6.5	6.4	+0.2	+0.3
150.9	147.1	138.3	+3.8	+12.6	39.1	38.6	37.6	+0.5	+1.5
26.1	25.1	24.4	+1.0	+1.7	6.9	6.7	6.7	+0.2	+0.2
23.6	22.7	21.9	+0.9	+1.7	5.9	5.7	5.6	+0.2	+0.3
17.0	17.0	15.5	+0.0	+1.5	4.1	4.2	4.0	-0.1	+0.1
50.5	49.7	46.7	+0.8	+3.8	14.2	14.1	13.6	+0.1	+0.6
33.7	32.6	29.8	+1.1	+3.9	8.0	7.9	7.7	+0.1	+0.3
54.8	54.6	52.1	+0.2	+2.7	9.8	9.8	9.6	+0.0	+0.2
182.9	180.1	165.6	+2.8	+17.3	50.1	49.6	47.2	+0.5	+2.9
16.9	16.2	14.9	+0.7	+2.0	4.6	4.5	4.2	+0.1	+0.4
48.3	47.3	40.4	+1.0	+7.9	8.2	8.1	7.0	+0.1	+1.2
46.2	45.9	44.0	+0.3	+2.2	13.6	13.6	13.8	+0.0	-0.2
71.5	70.7	66.3	+0.8	+5.2	23.7	23.4	22.2	+0.3	+1.5
112.1	110.3	107.8	+1.8	+4.3	49.2	48.5	47.1	+0.7	+2.1

-- Prepared by Labor Market Information, Research and Analysis (CPS-MOD, 1/84)

NONMETROPOLITAN COUNTIES LABOR FORCE AND EMPLOYMENT
November 1984 (Preliminary)

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	14,650	29,450	36,450	13,500	7,600	4,000	4,900
Total Unemployment	1,750	1,850	2,350	1,275	600	275	500
Rate	11.9%	6.3%	6.4%	9.4%	7.9%	6.9%	10.2%
Rate (Seas. Adj.)**. . . .	11.9%	6.2%	6.9%	9.3%	8.2%	6.7%	-INA-
Total Employment	12,900	27,600	34,100	12,225	7,000	3,725	4,400
THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS							
TOTAL WAGE AND SALARY. . . .	13,125	22,100	31,500	9,725	4,350	3,125	2,475
Manufacturing.	775	1,750	2,650	1,350	125	325	100
Mining and Quarrying	50	325	50	1,625	50	1,700	0
Construction	1,100	975	1,175	500	125	50	50
Trans., Comm., & Pub. Util..	1,700	1,375	2,150	275	150	50	50
Trade.	1,025	4,575	7,300	1,775	1,225	350	800
Fin., Insur., & Real Estate.	175	625	600	225	125	25	100
Services and Miscellaneous .	3,225	2,600	7,025	1,525	700	100	675
Government	5,075	9,875	10,550	2,450	1,850	525	700

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	21,950	24,000	31,050	8,700	30,850	36,825
Total Unemployment	1,600	2,025	2,500	1,200	1,675	3,200
Rate	7.3%	8.4%	8.1%	13.8%	5.4%	8.7%
Rate (Seas. Adj.)**. . . .	7.6%	8.5%	8.4%	12.4%	5.5%	-INA-
Total Employment	20,350	21,975	28,550	7,500	29,175	33,625
THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS						
TOTAL WAGE AND SALARY. . . .	15,325	16,850	23,775	7,400	17,325	23,975
Manufacturing.	2,200	1,825	3,000	900	2,100	1,775
Mining and Quarrying	250	1,100	3,850	25	325	50
Construction	950	625	650	225	1,050	1,700
Trans., Comm., & Pub. Util..	925	1,600	1,050	575	875	1,025
Trade.	4,450	3,000	4,025	3,000	4,575	7,675
Fin., Insur., & Real Estate.	725	275	750	225	725	800
Services and Miscellaneous .	2,775	3,925	2,125	1,075	3,150	4,350
Government	3,050	4,500	8,325	1,375	4,525	6,600

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

ARIZONA LABOR FORCE AND EMPLOYMENT FOR ECONOMIC ASSISTANCE PROGRAMS
September 1984 (Final)

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,421,821	1,364,637	57,184	4.0%
Apache	14,029	12,776	1,253	8.9
Cochise	28,569	26,952	1,617	5.7
Coconino	36,360	34,490	1,870	5.1
Gila	13,414	12,241	1,173	8.7
Graham	7,287	6,756	531	7.3
Greenlee	3,883	3,661	222	5.7
La Paz	4,810	4,276	534	11.1
Maricopa	904,474	876,858	27,616	3.1
Mohave	22,006	20,577	1,429	6.5
Navajo	23,569	21,878	1,691	7.2
Pima	260,675	251,197	9,478	3.6
Pinal	29,486	26,796	2,690	9.1
Santa Cruz	8,420	7,225	1,195	14.2
Yavapai	29,839	28,230	1,609	5.4
Yuma	35,000	30,724	4,276	12.2

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

ESTIMATED HOURS AND EARNINGS OF PRODUCTION WORKERS IN SELECTED INDUSTRIES IN ARIZONA
November 1984

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVG. HOURLY EARNINGS		
	NOV.* 1984	OCT. 1984	NOV. 1983	NOV.* 1984	OCT. 1984	NOV. 1983	NOV.* 1984	OCT. 1984	NOV. 1983
FOR THE STATE OF ARIZONA*									
Manufacturing	376.18	372.50	378.40	40.8	40.8	41.4	9.22	9.13	9.14
Aircraft & Missiles	INA	INA	518.25	INA	INA	44.6	INA	INA	11.62
Food & Kindred Products	313.43	310.87	327.85	40.6	39.4	41.5	7.72	7.89	7.90
Primary Metals	510.86	491.25	471.77	41.0	39.3	39.4	12.46	12.50	12.05
Machinery	322.40	321.12	346.88	40.3	40.7	41.1	8.00	7.89	8.44
Copper Mining	572.98	560.77	521.43	42.1	41.6	39.0	13.61	13.48	13.37
Construction	427.78	428.35	431.06	36.5	36.8	36.5	11.72	11.64	11.81
Utilities	541.68	541.68	544.32	43.3	43.3	44.8	12.51	12.51	12.15
Retail Trade**	237.81	235.58	211.15	35.6	34.9	33.2	6.68	6.75	6.36
Wholesale Trade	363.65	359.60	351.34	38.4	39.3	39.7	9.47	9.15	8.85

* Preliminary
** Excludes eating and drinking places.
NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Labor Market Information, Research and Analysis (1972 SIC, 1/84)

1984 INDEX TO THE ARIZONA LABOR MARKET NEWSLETTER

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ARIZONA UNEMPLOYMENT INSURANCE ACTIVITIES - OCTOBER 1984

	OCTOBER 1984	SEPTEMBER 1984	OCTOBER 1983	% Change From 1 Year Ago
Arizona Claimants Served*	21,848	26,640	35,749	-38.9%
Arizona Average Weeks Unemployed**	10.7	10.7	9.3	+15.1
Arizona Benefits Paid*	$ 7,141,414	$ 7,837,731	$ 10,249,204	-30.3%
Arizona Trust Fund Balance	$236,849,244	$225,830,260	$168,585,487	+40.5%

*All Programs **UI Only

NEW LMI PUBLICATIONS

Two popular LMI publications have been revised and are available upon request. The Job Seekers' Guide to Arizona is designed primarily for the out-of-state job seeker contemplating a move to Arizona. It contains valuable community information including the cost of living, availability of housing, educational facilities, climate and general labor market information. In addition, the publication includes names of other organizations the job seeker may want to contact prior to arrival, or after the move.

Arizonal Licensed Occupation Requirements has been updated to reflect the many changes in state occupational licensing requirements that have taken effect since the publication was last issued in 1980. The publication is arranged alphabetically by occupational title. (In Arizona, approximately 90 occupations require licenses.) Following each occupation is the name of the licensing authority, its address and telephone number, and examination and licensing information.

Single copies of these publications may be obtained by writing: Labor Market Information Publications - 733A, P. O. Box 6123, Phoenix, Arizona 85005. Multiple copies may be purchased for the cost of the printing.

ARIZONA'S GROWING INDUSTRIES

The accompanying table lists industries which have had growing employment levels from 1978 through 1984 in at least one of Arizona's counties. To determine which industries are growing, multiple data sources were used, including Unemployment Insurance data, Current Employment Statistics data, and local and state periodicals. A seven-year span was chosen in order to negate the effects of the business cycle.

The industries that are growing in the greatest number of counties are eating and drinking places (retail trade), medical and other health services, electrical machinery manufacturing, and printing and publishing manufacturing. The diversity--trade, services, manufacturing--is an indication of a healthy economy in Arizona. However, six rural counties (Apache, Gila, Graham, Greenlee, La Paz and Pinal) have no growing industries and four counties (Cochise, Navajo, Santa Cruz and Yuma) have only one growing industry. It is clear that considerably more industries are growing in the urban counties--21 in Maricopa and 15 in Pima.

Lists of occupations associated with each of these growing industries are included in the new edition of our Annual Planning Information publication. To request a copy, please write: Labor Market Information Publications - 733A, P. O. Box 6123, Phoenix, Arizona 85005.

Barbara Keene

ARIZONA'S GROWING INDUSTRIES
1978-1984

INDUSTRY	COUNTY
All Other Durables Manufacturing	Maricopa, Pima
Amusement and Recreation Services	Maricopa
Automotive Repair Services	Maricopa, Pima
Business Services	Maricopa, Pima
Chemicals and Allied Products Manufacturing	Maricopa
Communications and Public Utilities	Maricopa, Mohave
Construction	Pima
Eating and Drinking Places (Retail Trade)	Cochise, Maricopa, Mohave, Pima, Yavapai
Educational Services	Maricopa
Electrical Machinery Manufacturing	Maricopa, Pima, Santa Cruz
Fabricated Metals Manufacturing	Pima
Finance, Insurance, Real Estate	Maricopa, Pima
Food Stores (Retail Trade)	Maricopa, Yuma
General Merchandise and Apparel (Retail Trade)	Mohave
Hotels and Other Lodging Places (Services)	Maricopa, Pima
Legal Services	Maricopa, Pima
Medical and Other Health Services	Coconino, Maricopa, Mohave, Navajo
Miscellaneous Services	Maricopa, Pima
Other Retail Trade	Maricopa, Yavapai
Personal Services	Maricopa
Printing and Publishing Manufacturing	Coconino, Maricopa, Yavapai
Services (Non-Profit Organizations)	Pima
Special Trades (Construction)	Maricopa, Pima
Transportation Equipment Manufacturing	Pima
Transportation, except Railroads	Maricopa
Wholesale Trade	Maricopa, Pima

Manufacturing - Varian Associates Inc., the Palo Alto, California-based high technology firm, has opened a new electronics assembly center in Tempe designed to assemble and test printed circuit boards for 14 of the company's 21 divisions that produce systems and components for the defense, medical and communications markets. The 55,000-square-foot plant has a current staff of 10 but will eventually employ 250 people when it reaches full operation in 1987. Of the 240 people to be hired, according to a company spokesman, 100 will be engineers and technicians and the rest will be hourly assembly people.

Gates Learjet Co., which has recently laid off 400 of its Tucson workforce, has made special efforts to help the discharged employees find jobs with other companies. As a result of these efforts, including an "outplacement job fair," some 175 ex-employees have found full-time jobs. Of that number, 110 left Tucson for employment and 65 are working in Tucson. The majority of the 400 persons laid off at the airplane manufacturing plant were sheet metal workers. Another large category was electronic technicians and assemblers.

Mining - About 100 copper miners have returned to work at reduced wages despite a continuing strike at the Anamax Mining Co.'s Twin Buttes Mine. The strike by about 350 production workers began August 1, 1983, over terms of a new contract. The mine has operated during the strike with a work force of salaried employees. The 100 recalled workers will replace 187 salaried employees being laid off as Anamax curtails production.

Communications - Continental Telephone Co., which provides telephone service to towns in the White Mountain area and markets communication systems throughout the state, plans to consolidate its Phoenix-based Mountain Division with its Northwest Division in Bellevue, Washington, resulting in the relocation of about 50 employees. Other employees will be transferred to the company's Show Low office, with a current staff of 200. The consolidation is expected to be complete by March 1985.

Hotels - The Radisson Hotel Corp. plans to develop four hotels in Arizona within the next year. Two hotels are planned for Tucson, one inn-type hotel will be built in Yuma and negotiations are under way for building a hotel along the Camelback corridor in Phoenix. Radisson recently opened a hotel in downtown Mesa which will employ about 240 people.

Public Order and Safety - The state Corrections Department will begin building a 650-bed prison in Winslow this year that will provide about 350 jobs, most of which will probably go to Navajo County residents. The prison is expected to open in 1986.

The Tucson City Council has approved the hiring of 25 police officers. According to the police chief, the 25 officers will be "overhires" that will provide a means of filling vacancies and keeping pace with population growth from anticipated annexations.

Layoffs - Diamond's Department Stores, recently acquired from Dayton Hudson Corp. by Dillard Department Stores, has laid off 32 of the approximately 600 employees at Diamond's headquarters in Tempe. The cutbacks affected employees in the auditing, financial-planning, credit and accounting departments. No cutbacks were made at Diamond's stores, which employ about 2,900 people.

Terak Corp., a Scottsdale computer-graphics manufacturer, has laid off 23 salaried employees. Sixteen of the employees worked on the creation of a new product line which is now complete. Terak's computer-graphics systems are designed for computer-aided design and drafting.

Phoenix-based U-Haul International has cut management salaries by 10 percent to meet demands of its creditors and eliminated holiday bonuses for its 10,000 full-time employees. About 4,000 management person-

nel will be affected by the salary cuts, including 500 based in Phoenix.

Indian Jobs Program - The Navajo Tribal Council has agreed to establish a jobs program that would spend more than $10 million for reservation communities to create jobs in their areas. The money for the program would come from anticipated revenues from a Utah International coal-contract renegotiation approved by the council. Approval by the coal company's clients and the Interior Department are also required.

Program Helps Mentally Retarded Find Jobs - Jobs were found in Tucson by 30 of 53 mentally retarded young adults who were among 280 enrolled in a two-year experimental program conducted nationally. The Tucson success rate, 56 percent, was greater than in any other city where the program ran. Participants found jobs in housekeeping, laundry, woodwork, electronic assembly and food preparation. The program is continuing in Tucson through federal job training partnership financing and is operated by the Arizona Training Program office of the Developmental Disabilities Division of the Arizona Department of Economic Security. DES will accept 20 more mentally retarded young adults into the program in the first six months of 1985.

Apprenticeships - The Arizona Operating Engineers will begin accepting applications January 2 for entrance to its joint apprenticeship and training system. Applications will be accepted through January 31 from individuals between 18 and 30 years old who have a high school diploma or the equivalent. For additional information, call the Phoenix office at 252-6138 or the Tucson office at 623-2655.

The Phoenix Electrical Joint Apprenticeship and Training Committee for the Electrical Contracting Industry is accepting applications for its inside wireman and residential trainee programs. Applicants must have a high school diploma or the equivalent and reside in the Phoenix metropolitan area. Additional information about the programs and applying is available by calling the Phoenix Electrical JATC office at 263-8104.

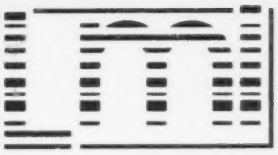
Education - Maricopa County Community College District officials have projected 3,500 fewer "full-time student equivalents" in the 1985-86 school year than originally expected, probably because of an improved economy. Officials now estimate the equivalent of 27,200 full-time students will attend district community colleges next year, nearly identical to the present figure of 27,141. Economic prosperity has also been cited by Dale Parnell, president of the American Association of Community and Junior Colleges, as the reason for a nationwide plateau in growth among two-year colleges.

GTE Corp., the parent company of Phoenix-based GTE Communications Systems, has selected Arizona as one of six states and the District of Columbia to participate in the $800,000 GTE Corp. Growth Initiatives for Teachers fellowship for 1985. The program provides funds for professional development and school enrichment opportunities to outstanding mathematics and science teachers in grades 7 through 12.

The Defense Department has chosen Carnegie-Mellon University as the home of a new computer-software institute. A consortium of 10 colleges, including Arizona State University, will constitute the Software Engineering Institute. ASU anticipates receiving several million dollars for research over the next five years as a member of the consortium.

The Phoenix Elementary School District is expected to cut at least 50 of its teachers and staff next year. Most of the reductions in staff will not affect certified teachers but will target custodians, attendance workers, bilingual-education aides, librarians and other non-certified workers. An additional 100 employees, including assistant principals, teachers and school nurses may also have to be laid off if a proposed budget override fails.

Correction - The number of Arizona Unemployment Insurance claimants served in September 1984 has been revised to 26,640. The figure originally printed in last month's Arizona Labor Market Newsletter was 29,640.



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